

Name _____

Keystone Warm-ups

Chapters 8 and 9: Photosynthesis and Respiration

Copy down all 4 answer choices for the daily warm-up from the board in the space below its question. Choose the best answer by circling its letter. Then, after we go over it, write the correct answer in the block provided on the front of the packet.

1	
6	

2	
7	

3	
8	

4	
9	

5	
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1. A protein in a cell membrane changed its shape to move sodium and potassium ions against their concentration gradients. Which molecule was most likely used by the protein as an energy source?

- (A) ATP (B) ADP
(C) catalase (D) amylase

2. Using a microscope, a student observes a small, green organelle in a plant cell. Which energy transformation most likely occurs first within the observed organelle?

- (A) ATP to light (B) light to chemical
(C) heat to electrical (D) chemical to chemical

3. In the transfer of energy from the Sun to ecosystems, which molecule is one of the first to store this energy?

- (A) protein (B) DNA
(C) fat (D) glucose

4. Energy from organic molecules can be stored in ATP molecules as a direct result of the process of

- (A) cellular respiration
- (B) cellular reproduction
- (C) diffusion
- (D) digestion

5. In an ecosystem, the growth and survival of organisms are dependent on the availability of the energy from the Sun. This energy is available to organisms in the ecosystem because

- (A) producers have the ability to store energy from light in organic molecules
- (B) consumers have the ability to transfer chemical energy stored in bonds to plants
- (C) all organisms in a food web have the ability to use light energy
- (D) all organisms in a food web feed on autotrophs

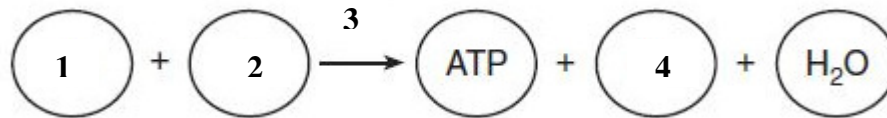
6. Which two organ systems provide materials required for the human body to produce ATP?

- (A) reproductive and excretory
- (B) digestive and respiratory
- (C) respiratory and immune
- (D) digestive and reproductive

7. Which part of a molecule provides energy for life processes?

- (A) carbon atoms
- (B) oxygen atoms
- (C) chemical bonds
- (D) inorganic nitrogen

8. A biological process that occurs in both plants and animals is shown below.



Which row in the chart below correctly identifies the numbered substances in this process?

	1	2	3	4
A	O₂	CO₂	glucose	enzymes
B	glucose	O₂	enzymes	CO₂
C	enzymes	O₂	CO₂	glucose
D	glucose	CO₂	enzymes	O₂

9. Photosynthesis and cellular respiration are two major processes of carbon cycling in living organisms. Which statement correctly describes one similarity between photosynthesis and cellular respiration?

- (A) Both occur in animal and plant cells.
- (B) Both include reactions that transform energy.
- (C) Both convert light energy into chemical energy.
- (D) Both synthesize organic molecules as end products.